

Deliberate self harm

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Introduction

This paper summarises the research evidence presented in a recent issue of *Effective Health Care* on deliberate self harm.¹

Deliberate self harm is one of the top five reasons for acute medical admissions in the UK.² The term deliberate self harm includes intentional self poisoning or self injury (such as cutting), irrespective of the apparent purpose of the act.³

Self poisoning is the most common form of deliberate self harm. Most cases of deliberate self poisoning present to general hospitals; in the UK there are more than 150 000 such attendances annually. The most common substances ingested are analgesics, particularly paracetamol and paracetamol containing compounds.⁴

Prevalence rates for self harm have been rising continuously since the mid-1980s to an estimated 400 per 100 000 population each year.⁴⁻⁵ This incidence is higher than most others recorded in Europe.⁶

Effective intervention after an episode of self harm is important because these individuals are at high risk of suicide. Repetition of self harm is common, especially in the weeks immediately after an episode; and the suicide rate over the following year is 100 times greater than among the general population.⁷ In the year before they die, about a quarter of all suicides are seen in hospital after a non-fatal act of self harm.⁸⁻⁹ Effective intervention after deliberate self harm, if it were available, could therefore be an important means of achieving the targets for reduction of the suicide rate which are outlined in the *Health of the Nation*¹⁰ and in the green paper, *Our Healthier Nation*.¹¹

Once there were two or three times as many episodes in women as men, now there is near equality.²⁻⁴⁻¹² Some general hospitals now deal with more referrals of men than women.¹³ This trend is worth noting because the suicide rate has been increasing among young men in the past 10 years. The mean age of the self harm population is in the early 30s for both sexes, the peak age for presentation being 15-24 years for women and 25-34 years for men.¹⁴⁻¹⁵

Most people report that they take overdoses in response to social problems¹⁶ including, difficulties with housing, unemployment, debt, illness, and conflict or loss in personal relationships.¹⁷ Evidence exists that repetition of self harm may occur despite resolution of personal problems.¹⁸⁻¹⁹

After an episode of deliberate self harm, about a third of general hospital attenders may be given a psychiatric diagnosis (usually depression²⁰), and a similar proportion have had previous contact with the psychiatric services.²¹ About 10% are alcohol dependent.²²⁻²⁴ Fewer than 10% have mental

illnesses such as schizophrenia or bipolar disorder.²⁵

Box 1 shows features associated with an increased risk of repetition or eventual suicide.⁷⁻²⁶⁻³⁵

Risk of repetition is not uniformly distributed, and some people repeat self harm on numerous occasions.³⁶ Although it is often assumed that those who repeat self harm frequently are predominantly women, the excess of women among chronic repeaters is probably no greater than among the self harming population as a whole.³⁶ Little is known about multiple repeaters, except for a subgroup of women who meet criteria for borderline personality disorder, many of whom have been subject to abuse (not always sexual) in childhood.³⁷

Nature of the evidence

The research evidence presented in *Effective Health Care* updates a review of the effectiveness of interventions after deliberate self harm.³⁸ Two trials are included which were reported after the review was published.³⁹⁻⁴⁰ A review of the research evidence on the characteristics of an effective clinical service for the assessment and aftercare of people who present after an episode of deliberate self harm was also undertaken. Details of the methods are reported elsewhere.¹

Published findings on deliberate self harm are limited in two ways. Firstly, the data come largely from studies on general hospital attenders, although up to a third of episodes may not lead to medical contact.⁴¹ Secondly, most research has been done on deliberate self poisoning rather than other forms of self harm such as cutting. There is some overlap between these behaviours, but caution should be taken about generalising.

Current services

PSYCHOSOCIAL ASSESSMENT

Specialist psychosocial assessment (box 2) has been recommended in guidelines produced by the Department of Health and Social Security,⁴² the Health Advisory Service,⁴³ and the Royal College of Psychiatrists.⁴⁴

Assessment and aftercare planning may be done by staff other than psychiatrists—social workers or psychiatric nurses, for example—providing they have proper training and supervision. Studies have shown that the content and the quality of their assessments are comparable with those made by trainee psychiatrists.⁴⁵⁻⁴⁸ Non-medical staff take longer over assessments than psychiatrists, and recommend psychiatric follow up more often.⁴⁸

Observational studies suggest that when accident and emergency (A&E) department staff make assessments in routine clinical prac-

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Factors predicting non-fatal repetition

- A history of self harm prior to the current episode
- Psychiatric history, especially as an inpatient
- Current unemployment
- Lower social class
- Alcohol or drug related problems
- Criminal record
- Antisocial personality
- Uncooperativeness with general hospital treatment
- Hopelessness
- High suicidal intent

Factors predicting suicide

- Older age
- Men
- Previous attempts
- Psychiatric history
- Unemployment
- Poor physical health
- Living alone

Box 1 Features which predict non-fatal repetition of deliberate self harm or eventual suicide

tice, the quality of note keeping is poor, and important information such as assessment of mental state or continuing suicidal thoughts is frequently not recorded.^{22 49-52} In practice, most assessments are done by junior psychiatrists working on a rota. Standards of training and supervision are patchy,⁵³ although it is unclear what effect this has on outcomes.

The majority of people who harm themselves arrive at hospital in the evening.⁵⁴ About half have consumed alcohol and many have taken other drugs which may impair judgment.^{22 24} Because it may not be possible in these circumstances to achieve accurate psychosocial assessment and arrange appropriate aftercare, it has been suggested that they should stay in hospital overnight,⁵⁵ but this argument is not widely accepted. In many hospitals, more than half of attenders are discharged from the A&E department.⁵⁶⁻⁵⁸ Patients who leave hospital direct from A&E, and especially those who leave without a psychosocial assessment, are less likely to have been offered follow up.^{56 59-61}

Only about half of hospital attenders receive a specialist psychosocial assessment before they leave,⁵⁶ most are discharged as soon as they are judged physically fit.^{62 63} Fewer than half are offered any follow up beyond the advice that they might see their general practitioner (GP). Reports indicate that direct discharge without specialist assessment is becoming increasingly common.^{49 56 64-67}

There are large variations in practice between services in different regions, and also between clinical teams in the same district.^{58 61 65 68} For example, there are threefold to fourfold differences in rates of discharge directly from the A&E department,^{56 58} and in rates for offering any form of psychiatric follow up.

People who harm themselves are not popular with health services staff.⁶⁹⁻⁷⁴ Similar negative

- To identify factors associated with suicidal behaviour
- To determine motivation for the act
- To identify potentially treatable mental disorder
- To assess continuing risk of suicidal behaviour
- To develop an appropriate aftercare strategy for the individual

Box 2 Aims of psychosocial assessment after deliberate self harm

attitudes are also found in the psychiatric services.⁷⁵ Self harmers suffer from the stigma of psychiatric problems, and they are often seen as undeserving and detracting from the clinical care of others whose illnesses are not perceived as self inflicted. People who harm themselves repeatedly, particularly those who cut themselves, may feel especially susceptible to this problem.

Aftercare

Specialist aftercare, when it is arranged, usually involves referral to psychiatric outpatients and social services.⁷⁶⁻⁷⁸ About 5-10% of cases lead directly to psychiatric admission. In about a quarter of hospitals there is a dedicated multidisciplinary self harm team, but such teams follow up only a small minority of cases.^{56 64 79} No evidence exists comparing the effectiveness of self harm teams with that of generic services.

Non-statutory agencies, particularly in larger cities, may offer help not otherwise provided to people who self harm. The best known of these agencies is the Samaritans. Early evaluations of the Samaritans produced conflicting evidence on its effectiveness.^{80 81} There has been no recent formal evaluation of the non-statutory agencies which offer help to self harming patients.

Effective interventions

Table 1 summarises the effectiveness of interventions to reduce the risk of repetition of deliberate self harm. The main interventions which have been evaluated in the trials are: a brief psychological treatment (problem solving therapy); more intensive but conventional psychiatric care (special clinics, outreach, continuity of therapist, routine general hospital admission, longer term contact); provision of a crisis card; intensive psychological treatment (dialectic behaviour treatment, inpatient treatment) and drug treatment (antidepressants, flupentixol).

The methodological quality of the reviewed randomised controlled trials was poor. In particular, many studies were small, and none included enough participants to give a reliable answer to the important question about the effect of intervention on repetition rates. Not all trials were analysed using an intention to treat analysis. Few used standardised measures of outcomes (such as mood or quality of life) other than repetition. The trials recruited highly selected patient groups that are not rep-

Table 1 Summary of participants, interventions, size of trial, and proportion (%) of participants who repeated behaviour during follow up

Study	Details of participants	Interventions	Proportion (%) of participants who repeated behaviour during follow up	
			Experimental	Control
Problem solving therapy <i>v</i> standard aftercare				
Gibbons <i>et al</i> (UK, 1978) ⁹⁹	Patients >17 years who presented to A&E department after deliberate self poisoning; repeaters (1 or more attempt) and first timers; 71% women	Experimental (n=200): crisis orientated, time limited, task centred social work at home (problem solving intervention). Control (n=200): routine service—54% GP referral, 33% psychiatric referral, 13% other referral	27/200 (13.5)	29/200 (14.5)
Hawton <i>et al</i> (UK, 1987) ⁸⁵	Patients >16 years admitted to general hospital for self poisoning; 31% repeaters; 66% women	Experimental (n=41): outpatient problem orientated therapy by non-medical clinicians. Control (n=39): GP care (for example, individual support, marital therapy) after advice from clinician	3/41 (7.3)	6/39 (15.4)
Salkovskis <i>et al</i> (UK, 1990) ¹⁰⁰	Patients aged 16–65 years (mean 27.5) referred by duty psychiatrist after antidepressant self poisoning assessed in A&E department; all repeaters with high risk of further repetition; 50% women	Experimental (n=12): domiciliary cognitive behavioural problem solving treatment. Control (n=8): treatment as usual (GP care)	3/12 (25.0)	4/8 (50.0)
McLeavey <i>et al</i> (Ireland, 1994) ¹⁰¹	Patients aged 15–45 years (mean 24.4) admitted to A&E department after self poisoning; 35.6% repeaters: 74% women	Experimental (n=19): interpersonal problem solving skills training. Control (n=20): brief problem solving therapy	2/19 (10.5)	5/20 (25.0)
Intensive care plus outreach <i>v</i> standard care				
Chowdhury <i>et al</i> (UK, 1973) ¹⁰²	Patients (all repeaters) admitted to general hospital after deliberate self harm; 57% women	Experimental (n=71): special aftercare—regular outpatient appointments; patients also seen without appointments; home visits to patients who missed appointments; emergency 24 hour telephone access. Control (n=84): normal aftercare—outpatient appointment with psychiatrist and/or social worker; non-attenders not pursued	17/71 (23.9)	19/84 (22.6)
Welu (USA, 1977) ¹⁰³	Suicide attempters >16 years brought to A&E department; 60% repeaters; % women not given	Experimental (n=63): special outreach programme—community mental health team contacted patient immediately after discharge; home visit arranged; weekly/twice weekly contact with therapist. Control (n=57): routine care—appointment for evaluation at the community mental health centre next day at request of treating physician	3/62 (4.8)	9/57 (15.8)
Hawton <i>et al</i> (UK, 1981) ⁹¹	Patients aged ≥16 years (mean 25.3) admitted to general hospital after deliberate self poisoning; 32% repeaters; 70% women	Experimental (n=48): domiciliary therapy (brief problem orientated) as often as therapist thought necessary; open telephone access to general hospital service. Control (n=48): outpatient treatment once a week in outpatient clinic in general hospital	5/48 (10.4)	7/48 (14.6)
Allard <i>et al</i> (Canada, 1992) ¹⁰⁴	Patients seen in A&E department for suicide attempt; 50% repeaters; 55% women	Experimental (n=76): intensive intervention—schedule of visits was arranged including at least one home visit; therapy provided when needed; reminders (telephone or written) and home visits made if appointments missed. Control (n=74): treatment by another staff team in the same hospital	22/63 (34.9)	19/63 (30.2)
Van Heeringen <i>et al</i> (Belgium, 1995) ⁹²	Patients aged ≥15 years treated in A&E department after suicide attempt; 30% repeaters; 43% women	Experimental (n=258): special care—home visits by nurse to patients who did not keep outpatient appointments, reasons for not attending discussed and patient encouraged to attend. Control (n=258): outpatient appointments only; non-compliant patients not visited	21/196 (10.7)	34/195 (17.4)
Van der Sande <i>et al</i> (Netherlands, 1997) ¹⁰⁵	Patients aged ≥16 years (mean 36.3) admitted to hospital after suicide attempt; 73% repeaters; 66% women	Experimental (n=140): brief psychiatric unit admission, encouraging patients to contact unit on discharge; outpatient therapy plus 24 hour emergency access to unit. Control (n=134): usual care—25% admitted to hospital, 65% outpatient referral	24/140 (17.1)	20/134 (14.9)
Emergency card <i>v</i> standard aftercare				
Morgan <i>et al</i> (UK, 1993) ⁸²	Mean age 30 years; patients admitted after first episode of deliberate self harm; % women not given	Experimental (n=101): standard care plus green card (emergency card indicating that doctor was available and how to contact them). Control (n=111): standard care—for example, referral back to primary healthcare team, psychiatric inpatient admission	5/101 (5.0)	12/111 (10.8)
Cotgrove <i>et al</i> (UK, 1995) ¹⁰⁶	Patients aged 12.2–16.7 years (mean 14.9) admitted after deliberate self harm; % repeaters not given; 85% girls	Experimental (n=47): standard care plus green card (emergency card) green card acted as passport to readmission into paediatric ward in local hospital. Control (n=58): standard follow up treatment from clinic or child psychiatry department	3/47 (6.4)	7/58 (12.1)
Dialectical behaviour therapy <i>v</i> standard aftercare				
Linenan <i>et al</i> (USA, 1991) ¹⁰⁷	Patients aged 18–45 years who had self harmed within 8 weeks before entering study; all women; all multiple repeaters of self harm	Experimental (n=32): dialectical behaviour therapy (individual and group work) for 1 year; telephone access to therapist. Control (n=31): months treatment as usual: 73% individual psychotherapy	5/19 (26.3)	12/20 (60.0)

Table 1 continued Summary of participants, interventions, size of trial, and proportion (%) of participants who repeated behaviour during follow up

Study	Details of participants	Interventions	Proportion (%) of participants who repeated behaviour during follow up	
			Experimental	Control
Inpatient behaviour therapy <i>v</i> inpatient insight orientated therapy Lieberman and Eckman (USA, 1981) ¹⁰⁸	Patients aged 18–47 years (mean 29.7) all repeaters; patients referred by psychiatric emergency service or hospital A&E department after deliberate self harm; 67% women	Experimental (n=12): inpatient treatment with behaviour therapy. Control (n=12): inpatient treatment with insight orientated therapy; both groups received individual and group therapy plus aftercare at community mental health centre or with private therapist	2/12 (16.7)	3/12 (25.0)
Same therapist (continuity at care) <i>v</i> different therapist (change of care) Torhorst <i>et al</i> (Germany, 1987) ¹⁰⁹	Patients referred to toxicological department of Technical University Munich after deliberate self poisoning; 48% repeaters; 62% women	Experimental (n=68): continuity of care—therapy with same therapist who assessed patient in hospital after attempt. Control (n=73): change months of care—therapy with different therapist than seen at hospital assessment	12/68 (17.6)	4/73 (5.5)
General hospital admission <i>v</i> discharge Waterhouse and Platt (UK, 1990) ¹¹⁰	Patients aged ≥16 years (mean 30.3) admitted to A&E department for deliberate self harm; 36% repeaters; 63% women	Experimental (n=38): general hospital admission. Control (n=39) discharge from hospital. On discharge both groups advised to contact GP if they needed further help	3/38 (7.9)	4/39 (10.3)
Flupenthixol <i>v</i> placebo Montgomery <i>et al</i> (UK, 1979) ¹¹¹	Patients aged 18–68 years (mean 35.3) admitted after suicidal act; all repeaters; 70% women	Experimental (n=18): 20 mg intramuscular flupenthixol deconate for 6 months. Control (n=19): placebo for 6 months	3/14 (21.4)	12/16 (75.0)
Antidepressants <i>v</i> placebo Hirsch <i>et al</i> (UK, 1982) ¹¹² R Draper, S Hirsch (personal communication)	Patients aged 16–65 years admitted after deliberate self poisoning; % repeaters and % women not given	Experimental (n=76): antidepressants—either 30–60 mg mianserin for 6 weeks or 75–150 mg nomifensine for 6 weeks. Control (n=38): placebo for 6 weeks	16/76 (21.1)	5/38 (13.2)
Montgomery <i>et al</i> (UK, 1983) ¹¹³	Patients with personality disorders (mean age 35.7 years) admitted to medical ward after deliberate self harm; all repeaters; 66% women	Experimental (n=17): mianserin 30 mg for 6 months. Control (n=21): placebo	8/17 (47.1)	12/21 (57.1)
Verkes <i>et al</i> (Netherlands 1998) ³⁹	Adults referred after self poisoning which was not their lifetime first, who did not have major depression. Analysed according to number of previous episodes.	Experimental (n=46) paroxetine 40 mg/day, control (n=45) placebo for 12 months.	15/46 (33) if <5 previous attempts for both groups	21/45 (47)
Long term therapy <i>v</i> short term therapy Torhorst <i>et al</i> (Germany, 1988) ¹¹⁴	All patients repeaters who had deliberately self poisoned; % women not given	Experimental (n=40): long term therapy—one therapy session a month for 12 months. Control (n=40): short term therapy—12 weekly therapy months sessions for 3 months; all participants had brief crisis intervention (3 days) in hospital	9/40 (22.5)	9/40 (22.5)
Family therapy <i>v</i> standard care Harrington <i>et al</i> , (UK, 1998) ⁴⁰	All children aged ≤16 years, admitted to a paediatric ward after deliberate self poisoning, and referred for psychiatric assessment. 90% girls	Experimental (n=85) 5 sessions home based family therapy. Control (n=77) received treatment as usual in child psychiatry clinic, averaging 3.6 sessions	11/74 (15)	11/75 (15)

representative of the self harm population, and their results cannot be readily generalised to routine clinical practice.

Because of small sample sizes, no trial produced a statistically significant difference in repetition rates; however, three types of intervention showed a trend in this direction. These were provision of a crisis card, problem solving therapy, and more intensive (dialectic) behaviour therapy.

PROVISION OF A CRISIS CARD

The crisis card carries advice about seeking help in the event of future suicidal feelings. A card assessed in a study in Bristol enabled the holder to speak to a psychiatrist at short notice and to request psychiatric admission in a crisis.⁸² Although the majority did not avail themselves of this, there was a suggestion of reduced repetition. The card was given only to

patients for whom it was their first episode of self harm.

An attempted replication (not yet published) has produced a negative result, however, perhaps because repeaters were also included in the intervention, or because psychiatric admission was not offered in the second study.⁸³ From a clinical perspective, it is reasonable to expect that people who attend hospital after an episode of self harm should be given advice about local services which could be used in a crisis or when self harm is contemplated. But because the best mode of delivering this advice (or its likely benefits) is unknown, further research is needed.

PROBLEM SOLVING THERAPY

Problem solving therapy is a brief treatment aimed at helping the patient to acquire basic problem solving skills, by taking him through a

series of steps: identification of personal problems; constructing a problem list which clarifies and prioritises them; reviewing possible solutions for a target problem; implementing the chosen solution; reappraising the problem; reiterating the process; and training in problem solving skills for the future.⁸⁴ This usually involves about six sessions lasting one hour, with some reading materials and work to be undertaken between sessions. It can be delivered by any experienced mental health professional with suitable training and supervision. Standardisation can also be improved by using a treatment manual.

Problem solving therapy has been shown to be an effective treatment for depression in other settings,⁸⁴ and in self harm studies it has led to improvement in other relevant outcomes such as mood and social adjustment.¹³ It may therefore be suitable for some individuals, although the scope of its applicability is unclear from the existing evidence.

DIALECTIC BEHAVIOUR THERAPY

This treatment was introduced as a method of helping those who engage in chronic repetitive self harm, particularly when they have associated borderline personality characteristics.³⁷ It is intensive, involving in its full form a year of individual treatment, group sessions, social skills training, and access to crisis contact. The interest it has provoked is due to the suggestion that it leads to a reduction in self harming behaviour in a group of people for whom the services have little or nothing else to offer. Because it is an intensive intervention, better evidence of its applicability and cost effectiveness is required. It does offer, however, an interesting model for the care of people who have problems which are among the most intractable in psychiatry.

SERVICES IN THE GENERAL HOSPITAL

Even when aftercare is arranged, it is not always taken up. According to the type of service reported, 30–70% of those offered psychiatric follow up either do not attend at all or drop out after their first appointment.^{85–89} This is true even when the referral is to a specialist service such as an alcohol and addictions service, or when the clinic is arranged in the A&E department so that the patient is returning to the place (perhaps to see the same person) where the original assessment was undertaken.⁹⁰

The best rates of contact are achieved by outreach programmes,^{91 92} which are the only means of maintaining contact with the 20–30% of patients who will not attend clinic appointments.

Aftercare through the usual psychiatric services is unsatisfactory because repetition of self harm tends to occur early; of those who repeat within a year, a quarter will do so within three weeks.⁸⁶ Few routine clinics can offer new appointments within this timescale, particularly for the numbers of people for whom it would be required.

GPs AND DELIBERATE SELF HARM

Around 50–60% of patients visit their GP in the month before an episode of self harm.^{21 93 94} For this reason, attention has turned to the possibility of basing primary or secondary prevention in general practice. However, up to half of GP consultations before a self harm episode are not for overtly psychosocial reasons,⁹⁵ so the opportunities for detection and primary intervention at this contact may not be as great as is sometimes supposed.

The most frequent management decision made after assessment is that the patient should return to see their GP. Around half of patients do visit their GP in the one to two months after an episode.^{93 96–98} As noted above, even when specialist aftercare is proposed, there are difficulties in arranging predictable follow up with psychiatric services. This raises the question of the role of the GP in the management of self harm. In a trial assessing intervention in primary care, nearly half of those scheduled to receive GP counselling had not seen their GP within two months of the original episode.⁸⁵ These figures show that any intervention in general practice would need to have a component aimed at achieving higher attendance rates than are achieved through routine practice. There is no research evidence which answers the question of what intervention should be offered by GPs.

No detailed UK data exist about the costs of providing self harm services, and none of the trials reviewed above included a cost effectiveness analysis.

Implications for practice

All hospital attendance after deliberate self harm should lead to a specialist psychosocial assessment. This should identify motives for the act, and those associated problems which are potentially amenable to intervention such as psychological or social problems, mental disorder, and alcohol and substance misuse.

Direct discharge from A&E should only be contemplated if a psychosocial assessment and aftercare plan can be arranged before discharge. Aftercare arrangements should include advice on the services available. Accessible and comprehensive services need to include a mechanism for engaging people who do not attend routine clinic appointments. Access to follow up needs to be rapid as repetition can occur soon after the episode. Service providers should work to improve attitudes towards self harming patients, for example through training aimed at increasing knowledge.

GPs should have ready access to training and advice about the assessment and management of self harm patients in primary care.

Implications for research

Research is needed to determine the effect of discharge directly from the A&E department after presentation with deliberate self harm; whether it reduces the quality or outcomes of psychosocial assessment, the effect it has on subsequent contact with services, and on outcomes.

Research is needed to establish the clinical and cost effectiveness of potential interventions. Trials should be large enough to determine whether the intervention reduces repetition, but should examine other relevant outcomes including use of health and social services, quality of life, mood, interpersonal problems, and social functioning.

Trials might focus on specific subgroups, such as chronic repeaters or those suffering from alcohol dependence, if large enough sample sizes can be recruited. Alternatively, if the subjects are to be representative of all self harm patients, they should include all hospital attenders not only patients recruited from psychiatric services or patients who visit their GP.

Research is needed into forms of self harm other than drug overdose, and in particular into cutting—its causes, outcomes, and effective treatments.

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